



The Influence of Information Technology on Managerial Performance: Management Accounting Systems As Intervening Variables

Puspita Maelani

Faculty of Economics and Business, Bina Bangsa University

puspita.maelani91@gmail.com

Najmudin

Faculty of Economics and Business, Universitas Sultan Ageng Tirtayasa

najmudin@untirta.ac.id

Abstract

The purpose of this study was to determine and analyze the influence of information technology on managerial performance mediated by the management accounting system. The method used in this study is descriptive quantitative, with a population of Manufacturing SMEs in Serang Regency, sampling using a purposive sampling technique, The data in this study were obtained by sending questionnaires directly to the respondents. The data that has been obtained is analyzed using the structural equation modeling (SEM) method with the partial least squares (PLS) approach. The results of this study indicate that information technology has a positive and significant effect on the managerial performance of Small and Medium Enterprises (SMEs), information technology has a positive and significant effect on SME management accounting systems, management accounting systems has a positive and significant effect on SME managerial performance, and information technology has a significant and positive effect on SME managerial performance. indirectly on the managerial performance of SMEs through the management accounting system. The implications of this study are the use of information technology on managerial performance in SMEs so that they can obtain information related to the management accounting system needed by SMEs in making decisions.

Keywords: Managerial Performance, Management Accounting Systems, Information Technology

INTRODUCTION

The existence of Small and Medium Enterprises (SMEs) is an effort to increase the economic level of middle to lower-class people with the various products they process. In addition, the ability to maintain SMEs so that it continues to exist is not an easy thing to do. Therefore, organizational management must also be controlled because, without organizational management, it is certain that SMEs will run in place and even go out of business. The existence of market competition cannot be avoided by every SMEs wherever it exists, and conditions of increasingly rapid technological development. One way to maintain SMEs is by making organizational strategies and using and utilizing technology. This ability is carried out by SMEs with the use of management accounting systems in obtaining information so that managers can make effective and efficient decisions.

Table 1. Development of SMEs Data for 2018-2019

No	Indicator	Unit	Year (%)		
			2017	2018	2019
	Business unit				
1			98.70	8.68	98.67
	a. Micro business	units	1.0	1.22	1.22
	b. Small business		0.09	0.09	0.10
	c. Medium business				
	Labor				
2			87.73	89.04	89.04
	a. Micro business		5.44.3	4.84	4.81
	b. Small business	Person	.64	3.70	3.07
	c. Medium business				
	GDP at current prices				
3					
	a. Micro business				
	b. Small business	Billion	37.59	37.77	37.35
	c. Medium business		9,613	9.60	9.53
			3.69	13,7	13.63

Based on Table 1, the development of SMEs has fluctuated in terms of capital, labor, and business volume. Even though the government has made protection through policies issuing laws in 2008, and government regulations in 2013. The number of SMEs in the city of Serang continues to grow with the support of the local government through the Dinkopukmperindag through counseling, mentoring, and assistance to SMEs, but in the process SMEs encounter problems - Constraints such as the use of technology and management accounting systems. Technology that continues to develop affects performance patterns in SMEs, as reported by the Dinkopukmperindag City of Serang SMEs focus more on product operations while the use of technology that supports needs and sustainability has not been fully used by SMEs. And SMEs also have not utilized the management accounting system, while information on the management accounting system is needed by SMEs in the continuity of their business. Such as information about the accuracy of the number of products, for example, the condition of SMEs that have not utilized the management accounting system so that it is overloaded in the number of goods or services produced. this information is needed by a manager or SMES manager in making the right decision.

With these problems in addition to the protection provided by the government, SMEs must also prepare capable resources utilization of information technology such as the availability of personal computers (PCs) which are supported by various kinds of easy-to-operate software that allows managers to access information quickly and prepare more reports. Besides that, the use of information technology, which combines computer technology and communication technology can help SAM to present scope information wide.

According to (Arsono Laksana & Muslichah Muslichah, 2002), This is possible because by using the network, information related to the external and internal environment can be obtained easily and quickly. With the use of a management accounting system information serves as a

support that produces relevant and timely information for planning, controlling, decision-making, and performance evaluation. According to Aliyah and Hidayat said that SMEs that use management accounting systems will be able to formulate, implement and monitor their strategies to deal with competition, and accounting system information can assist management in identifying opportunities to increase consumer value, to be able to retain existing customers, and increase market share. (Maelani, 2017).

Gusti and Lovelly (2014) state that the management accounting system influences managerial performance. So the information needs related to SMEs helps managers or managers of SMEs in making decisions. However, according to Ana Marina (2009), the management accounting system does not affect managerial performance, this is due to human resources or SME employees who have not been able to understand the use of the management accounting system.

THEORETICAL FRAMEWORK AND HYPOTHESIS

Information Technology

Information Technology is a technology that is used to process data, including processing, obtaining, compiling, storing, and manipulating data in various ways to produce quality information, namely information that is relevant, accurate, and time-consuming. In personal, business, and government and is strategic information for decision-making. Haag and Cummings present five categories of information processing tasks which include capturing, conveying, creating, storing, and communicating ((Arsono Laksmana & Muslichah Muslichah, 2002)). Each of these information-processing tasks can be used individually, or they can be combined to create a system that handles all tasks.

1. Capture information
2. Submit information
3. Creating information
4. Save information
5. Communicating information

Management Accounting System

According to Hansen and Mowen (2009), management accounting information systems provide the information needed to meet certain management objectives (Santoso, 2012). Management accounting information system is a process that is described by the activities, such as collection, measurement, storage, analysis, reporting, and management of information. The scope or characteristics of the management accounting system are broad scope characteristics, timeliness characteristics, aggregation characteristics, and integration characteristics.

Managerial Performance

Managerial performance according to Mulyadi in the journal of (Sianipar, 2013) is someone who holds a managerial position is expected to be able to produce a managerial performance. In contrast to employee performance which is generally concrete in nature, managerial performance is abstract and complex. Managers produce performance by mobilizing talents and abilities, as well as the efforts of several other people who are in their area of authority. Therefore, managers need a conceptual framework as a working model that can be used as a communication tool to generate managerial performance.

Performance measurement serves to assess the success or failure of an organization, program, or activity to assess the level of magnitude of deviations between actual performance and expected performance, therefore efforts are made to improve and improve managerial performance. The indicators/measurements of managerial performance according to Agbejule in the journal of Hadjis, (2012) namely: Planning, Investigating, Coordinating, Evaluating, Supervising, Staffing, Negotiating, Representing, and Overall performance such as revenue growth, profit, and market share.

Hypothesis Development

Information Technology on Management Accounting Systems.

Murty (2017) in his research suggested that information technology has a significant positive effect on the management accounting system. Fiktoriya & Solovida, (2021) in his research also found that information technology has a positive and significant effect on the management accounting system. Based on this description, the hypothesis can be drawn:

H1: Information technology has a positive and significant effect on the management accounting system.

Information Technology on Managerial Performance

Murty (2017) in his research found that information technology has a significant positive effect on managerial performance. Siregar et al., (2018) in their research also found that information technology affects managerial performance. So as Fiktoriya & Solovida, (2021) in his research found that information technology has a positive and significant effect on managerial performance. In line with the three researchers, Irzan & Abdullah (2018) also found that information technology has a positive and significant effect on managerial performance. Based on the results of this study, the hypothesis can be drawn:

H2: Information technology has a positive and significant effect on managerial performance.

Management Accounting System on Managerial Performance

Wijaya (2021) in his research suggested that the management accounting system has a positive effect on managerial performance, Ilmy et al., (2021) in his research also found that the management accounting system has a positive and significant effect on managerial performance, Fiktoriya & Solovida, (2021) in his research also found that the management accounting system has a positive and significant effect on managerial performance. Based on the results of this study, the hypothesis can be drawn:

H3: The management accounting system has a positive and significant effect on managerial performance.

Information Technology on Managerial Performance moderated by the Management Accounting System.

Fiktoriya & Solovida, (2021) in his research found that information technology has an indirect effect on managerial performance through the mediation of the management accounting system. Based on the results of this study, the hypothesis can be drawn:

H4: Information technology has an indirect effect on managerial performance through the mediation of the management accounting system

RESEARCH METHOD

The method used is the descriptive quantitative method. According to Sugiyono (2019: 17), quantitative research is defined as a research method based on the philosophy of positivism, used to examine certain populations or samples, collecting data using research instruments, data analysis is quantitative/statistical, to test a predetermined hypothesis. According to Narbuko and Ahmadi (215), Descriptive research is a study that seeks to answer existing problems based on data. The process of analysis in descriptive research is presenting, analyzing, and interpreting. This research is focused on Manufacturing SMEs in Serang Regency. The population in this research is Manufacturing SMEs in Serang Regency with purposive sampling, namely the criteria for owners or managers (production or marketing department and finance department) who have experience in their position for at least 1 year and are willing to be respondents in this study. The data in this study were obtained by sending questionnaires directly to the respondents. The data in this study were analyzed using the structural equation modeling (SEM) method with the partial least squares (PLS) approach. SmartPLS software is used in data processing in this study. After knowing the results of information technology on managerial performance with the management accounting system as an intervening variable. The data in this study were obtained by sending questionnaires directly to the respondents. The data in this study were analyzed using the structural equation modeling (SEM) method with the partial least squares (PLS) approach. SmartPLS software is used in data processing in this study. After knowing the results of information technology on managerial performance with the management accounting system as an intervening variable.

Based on the description above, the researcher used a sampling technique with purposive sampling, namely (1) having a vision and mission statement for SMEs. (2) Has an organizational/workforce structure that is following its division (production department, finance division, etc.), and (3) Has a workforce of at least 19 people.

Table 2. MSME Workforce Levels

Levels	Micro business	Small business	Medium Business	Big business
Total manpower	<>	5-19 people	20-99 people	> 100 people

Source: Central Bureau of Statistics (BPS)

SMEs Manager (Owner and or Head of production/marketing and finance division), Experience in this position for at least 1 year. And SMEs that have a turnover of > 200 million–50 billion.

Table 3. Criteria for MSME Assets or Turnover

No	Criteria	Asset
1	Micro business	max. 50 Million Max. 300 Million
2	Small business	> 50 Million – 500 Million > 300 Million – 2.5 Billion
3	Medium Business	> 500 Million – 10 Billion > 2.5 Billion – 50 Billion

Source: Law No. 20 of 2008 based on Turnover

Willing to be researched regarding management accounting systems, competition, and SMEs strategies and their impact on managerial performance

RESULTS AND DISCUSSION

Research result

Of the 145 questionnaires sent directly to SMEs, only 97 questionnaires were returned, and 48 questionnaires were not returned. This happened because the respondents were busy and exceeded the return period. Meanwhile, from the returned questionnaires, 12 incomplete questionnaires were questionnaires that were not filled in completely or some questions were not answered by the respondents. Therefore, only 85 questionnaires were complete and could be processed.

Reliability test using values from Cronbach alpha and composite reliability (Gozali, 2008:43). Each variable is said to be reliable because the value of Cronbach alpha is >60 and composite reliability. One of the criteria used to assess the Outer Model in PLS is to look at Convergent Validity. The convergent validity of the measurement model with reflexive indicators is assessed based on the correlation between the item score/component score estimated by the PLS software. The individual reflexive measure is said to be high if it correlates more than 0.7 with the construct (latent variable) being measured. However, according to Chin in Ghazali (2006; 24), for research in the early stages of development, a loading scale of 0.5 to 0.6 is considered sufficient. The results of this study can be seen in Table 1 on Quality Criteria

Table 4 Quality Criteria

Variable	AVE	Composite Reliability	Cronbach Alpha	R-Square
Information Technology	0.593	0.878	0.829	
Sam	0.824	0.949	0.929	0.319
Managerial Performance	0.477	0.872	0.835	0.831

Source: 2022 PLS Processed Data

Testing of the inner model or structural model is carried out to see the relationship between the constructs, the significance value, and the R-square of the research model. The structural model was evaluated using the R-square for the dependent construct, the Stone-Geisser Q-square

test for predictive relevance, and the t-test and the significance of the structural path parameter coefficients. Significance

The estimated parameters provide very useful information about the relationship between the research variables. The limit for rejecting and accepting the proposed hypothesis is ± 1.996 , where if the t statistic value is greater than the t table (1.990) then the hypothesis is accepted, conversely, if the t statistic value is less than the t table (1.990) then the hypothesis is rejected.

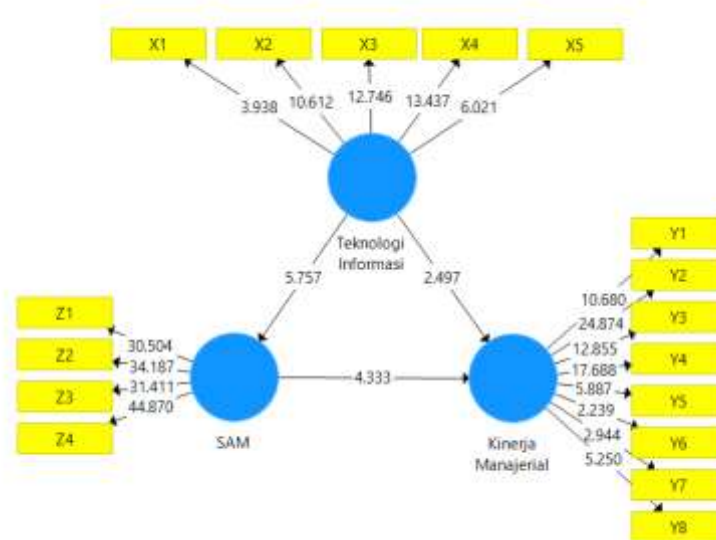


Figure 1 Full Model Structural Partial Least Square

Table 5 Result of Inner Weights

	Original Sample (O)	Sample Means (M)	Standard Deviation (STDEV)	T Statistics (O/STDEV)
SAM -> Managerial Performance	0.591	0.640	0.136	4,333
Information Technology -> Managerial Performance	0.436	0.366	0.175	2,497
Information Technology -> SAM	0.565	0.632	0.098	5,757

Source: 2022 PLS Processed Data

Based on Table 2 above, it can be seen that information technology has a positive effect of 0.565 and is significant at 0.05 ($5.757 > 1.990$) on the management accounting system. For the variable information technology on managerial performance has a positive effect, this is evidenced by 0.436 and is significant at 0.05 ($2.497 > 1.990$). And for the management accounting system variable on managerial performance, it can be seen from the significance of 0.05 ($4,333 > 1,990$).

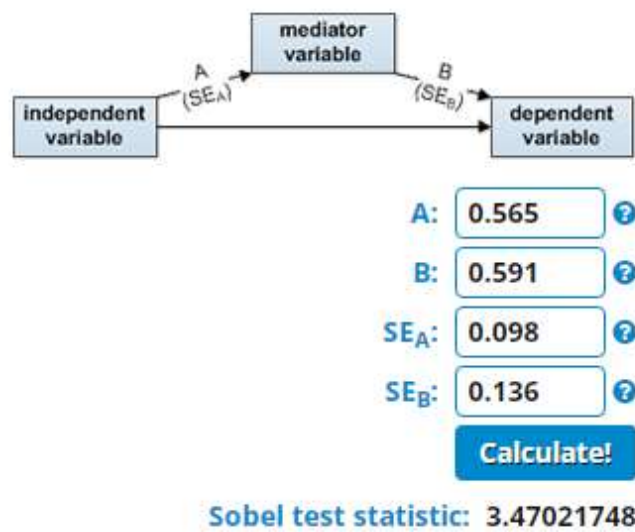


Figure 2 Sobel Test Results from The Influence of Information Technology on Managerial Performance Moderated by the Management Accounting System.

The results show that the influence of the information technology variable on managerial performance variables mediated by the management accounting system has a t-statistical value of 3,470, this value is greater than the t table, namely 1,990. These results indicate that the information technology variable on managerial performance is mediated by the management accounting system. This is under the proposed hypothesis, so the hypothesis is accepted

Discussion

the influence of information technology on management accounting Systems

In this study, the first hypothesis states that information technology has a significant effect on the management accounting system. Based on the results of data processing using the Smart PLS software, the calculation results are presented in Table 3. It is known that the parameter coefficient value of the information technology variable is 0.565 and the t-statistic value of 5,757 is greater than the t-table value of 1.990 (significant at a p-value of 0.05). Thus, the first hypothesis is accepted. Therefore, it can be concluded that information technology influences the management accounting system.

The results of this study are in line with the findings of Murty (2017) which suggest that information technology has a significant positive effect on the management accounting system, and Fictoriya & Solovida (2021) found that information technology has a positive and significant effect on the management accounting system.

Information technology emerged as a result of the increasing spread of globalization in organizational life, increasingly fierce business competition, shortening the life cycle of goods and services offered, and increasing demands for consumer tastes for the products and services offered (Wahjono and Arini, 2011). Coupled with the conditions of the Covid-19 pandemic, which require all organizations to utilize technology in promotion, product marketing, and selling products to consumers. To anticipate all of this, SMEs are looking for breakthroughs by utilizing technology. Technology is expected to be a facilitator and interpreter. Initially, information technology was used only limited to data processing. With the development of information technology, almost all organizational activities today have been entered by information technology applications and automation. Information technology can be defined as a

combination of computer and telecommunications technology with other technologies such as hardware, software, databases, network technology, and other telecommunications equipment. Furthermore, information technology is used in organizational information systems to provide information for users, especially for SME owners in the framework of decision-making.

The application of information technology to Manufacturing SMEs in Serang Regency is to store this information as seen from the most dominant indicator in forming the construct. The dominance of these indicators is evidenced by the value of the loading factor indicator for storing information of 13,473. so what SMEs face in information technology is storing all the information received by SMEs. Information such as product orders from both consumers and suppliers, labor information, raw material suppliers information, financial loan information, and others.

According to (Sri Maharsi, 2000)) a management accounting information system is an information system that processes the input to produce output to achieve management's specific goals. The characteristics of management accounting are broad scope timeliness characteristics, aggregation characteristics, and integration characteristics.

The influence of information technology on a broad scope is one of the implications of increasing authority and responsibility after receiving information, owners and managers use all information according to their function as controllers. Timeliness or accuracy has two sub-dimensions, namely reporting frequency and reporting speed. Frequency relates to how often information is provided to SMEs owners or managers. Speed is related to the time lag between the need for information and the availability of information. Integration, the more the number of segments and business units in the organization, the greater the need for information on the integration characteristics of MAS. In other words, integrated informatics provides a coordinating role in various decisions for SMEs. The characteristic of aggregation or collection is a summary of information according to function, period, and decision models. Information by the function will provide information relating to the results of decisions from other units. Such as SMES owners or managers receiving all information from each division. This must be consistent with the formal decision model used by the organization, this information can reduce or save time in making decisions because the information has been collected and organized according to different functions and timeframes.

The Influence of information technology on managerial performance

In this study, the second hypothesis states that information technology has a significant effect on managerial performance. Based on the results of data processing using SmartPLS software, the calculation results are presented in Table 2. It is known that the parameter coefficient value of the information technology variable is 0.436 and the t-statistic value of 2,497 is greater than the t-table value of 1.990 (significant at a p-value of 0.05). Thus, the first hypothesis is accepted. Therefore, it can be concluded that information technology influences managerial performance.

The results of this study are in line with Murty's research (2017) found that information technology has a significant positive effect on managerial performance, Siregar et al., (2018) found that information technology affects managerial performance, Fiktoriya & Solovida, (2021) who found that information technology has a positive and significant effect on managerial performance, and Irzan & Abdullah (2018) who found that information technology has a positive and significant effect on managerial performance.

The emergence of computer-based IT makes it easier for people to carry out activities in accessing information anywhere and anytime. It can integrate, communicate, and exchange

geographically distributed various important business activities. In addition, IT can penetrate the bureaucracy due to the existence of an organizational structure so that the boundaries between functions within the organization are easily penetrated to increase the smoothness of cooperation between functions. When information technology is implemented in SMEs, it will accelerate the performance of the manager or manager of SMEs. Information technology is increasingly complete both from the software used and physically, all the information obtained from this information technology can make it easier for SME owners to obtain solutions to solve problems faced by SMEs,

The Influence of management accounting systems on managerial performance

In this study, the second hypothesis states that MAS has a significant effect on managerial performance. Based on the results of data processing using SmartPLS software, the calculation results are presented in Table 2. It is known that the parameter coefficient value of the information technology variable is 0.591 and the t-statistic value of 4,333 is greater than the t-table value of 1.990 (significant at a p-value of 0.05). Thus, the first hypothesis is accepted. Therefore, it can be concluded that information technology influences managerial performance.

The results of this study are in line with the research of Wijaya (2021) which suggests that the management accounting system has a positive effect on managerial performance, Ilmy et al., (2021) in his research also states that the management accounting system has a positive significant effect on managerial performance, and Fictoriya & Solovida (2021) in his research which found that the management accounting system had a positive and significant effect on managerial performance.

The influence of information technology on managerial performance mediated by management accounting.

Based on the results of the calculation of the Sobel test of influence the information technology variable on managerial performance variables mediated by the management accounting system has a t-statistical value of 3,470, this value is greater than the t table, namely 1,990. This is following the proposed hypothesis, so the hypothesis is accepted. The results of this study are in line with the research of Fiktoriya & Solovida, (2021) who found that information technology has an indirect effect on managerial performance through the mediation of the management accounting system

CONCLUSIONS

Based on the results of the research and discussion above, it can be concluded that information technology has a positive and significant effect on the managerial performance of Small and Medium Enterprises (SMEs), information technology has a positive and significant effect on SME management accounting systems, management accounting systems has a positive and significant effect on SMEs managerial performance, and information technology has an indirect effect on the managerial performance of SMEs through the management accounting system. Suggestions for SMEs in the city of Serang are to take advantage of technological developments and management accounting systems can assist managers in improving the performance of SMEs so that they can continue to grow. For further research, it is expected to use other variables that can affect managerial performance or SMES performance such as culture, competition,

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